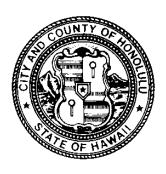
# DRIVER TAILGATE LESSON PLAN

# Seeing the Road



CITY AND COUNTY OF HONOLULU DEPARTMENT OF HUMAN RESOURCES Division of industrial Safety and Workers' Compensation

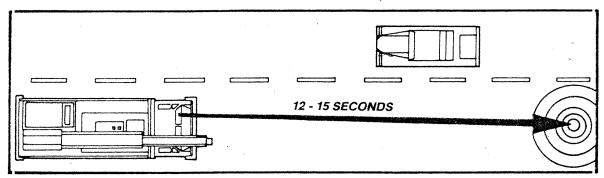
# SEEING THE ROAD

TO BE A SAFE DRIVER YOU NEED TO KNOW WHAT'S GOING ON ALL AROUND YOUR VEHICLE. NOT SEEING PROPERLY IS A MAJOR CAUSE OF ACCIDENTS.

## **SEEING AHEAD**

THE IMPORTANCE OF LOOKING FAR ENOUGH AHEAD. ALL DRIVERS LOOK AHEAD, BUT MANY DO NOT LOOK FAR ENOUGH. BECAUSE STOPPING OR CHANGING LANES CAN TAKE A LOT OF DISTANCE, KNOWING WHAT THE TRAFFIC IS DOING ON ALL SIDES OF YOU IS VERY IMPORTANT. YOU NEED TO LOOK WELL AHEAD TO MAKE SURE YOU HAVE ENOUGH ROOM TO CHANGE LANES OR STOP SAFELY.

HOW FAR AHEAD DO I LOOK? GOOD DRIVERS LOOK 12 TO 15 SECONDS AHEAD. THAT MEANS LOOKING AHEAD THE DISTANCE YOU WILL TRAVEL IN 12 TO 15 SECONDS. AT LOWER SPEEDS, THIS IS ABOUT ONE BLOCK. AT HIGHWAY SPEEDS IT'S ABOUT A QUARTER OF A MILE. IF YOU'RE NOT LOOKING THAT FAR AHEAD, YOU ARE NOT DRIVING SAFELY. LOOKING 12 TO 15 SECONDS AHEAD DOESN'T MEAN NOT PAYING ATTENTION TO THINGS THAT ARE CLOSER. GOOD DRIVERS SHIFT THEIR ATTENTION BACK AND FORTH, NEAR AND FAR.

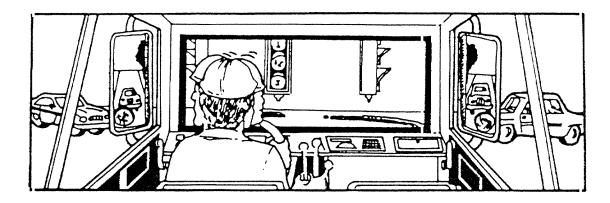


LOOK FOR TRAFFIC. LOOK FOR VEHICLES COMING ONTO THE HIGHWAY OR INTO YOUR LANES OR TURNING. WATCH FOR BRAKE LIGHTS FROM SLOWING VEHICLES. BY SEEING THESE THINGS FAR ENOUGH AHEAD, YOU CAN CHANGE YOUR SPEED OR CHANGE LANES IF NECESSARY, TO AVOID A PROBLEM.

LOOK FOR ROAD CONDITIONS. LOOK FOR HILLS, CURVES, WET SPOTS OR ANYTHING ELSE THAT MAY CAUSE YOU TO SLOW OR CHANGE LANES. PAY ATTENTION TO TRAFFIC SIGNALS AND SIGNS. IF A LIGHT HAS BEEN GREEN FOR A LONG TIME, IT WILL PROBABLY CHANGE BEFORE YOU GET THERE. START SLOWING DOWN AND BE READY TO STOP. TRAFFIC SIGNS MAY ALERT YOU TO ROAD CONDITIONS WHERE YOU MAY HAVE TO CHANGE SPEED.

#### SEEING TO THE SIDES AND REAR

IT'S IMPORTANT TO KNOW WHAT'S GOING ON BEHIND AND TO THE SIDES OF YOUR VEHICLE. CHECK YOUR MIRRORS REGULARLY AND FREQUENTLY IN SPECIAL SITUATIONS.

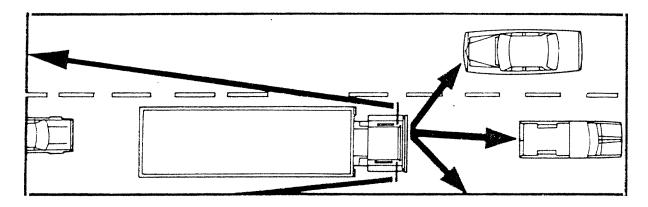


**REGULAR CHECKS.** YOU NEED TO MAKE REGULAR CHECKS OF YOUR MIRRORS TO BE AWARE OF TRAFFIC AND TO CHECK YOUR VEHICLE.

TRAFFIC. CHECK YOUR MIRRORS FOR VEHICLES ON EITHER SIDE AND IN BACK OF YOU. IN AN EMERGENCY, YOU MAY NEED TO KNOW WHETHER YOU CAN MAKE A QUICK LANE CHANGE. USE YOUR MIRRORS TO SPOT OVERTAKING VEHICLES. THERE ARE "BLIND SPOTS" THAT YOUR MIRRORS CANNOT SHOW YOU. CHECK YOUR MIRRORS OFTEN TO KNOW WHERE OTHER VEHICLES ARE AROUND YOU AND TO SEE IF THEY MOVE INTO YOUR BLIND SPOTS.

## SPECIAL SITUATIONS

SPECIAL SITUATIONS REQUIRE FREQUENT MIRROR CHECKS. THESE ARE LANE CHANGES, TURNS, MERGES, AND TIGHT MANEUVERS.



LANE CHANGES. YOU NEED TO CHECK YOUR MIRROR TO MAKE SURE NO ONE IS ALONGSIDE OR ABOUT TO PASS YOU. CHECK YOUR MIRRORS:

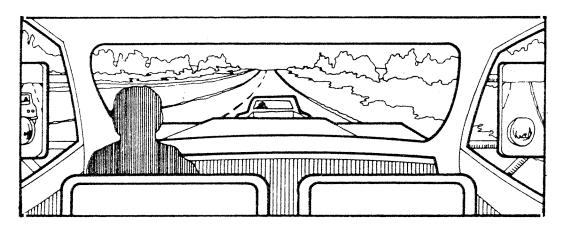
- ? BEFORE YOU CHANGE LANES TO MAKE SURE THERE IS ENOUGH ROOM.
- ? AFTER YOU HAVE SIGNALED TO CHECK THAT NO ONE HAS MOVED INTO OR OUT OF YOUR BLIND SPOT.
- ? RIGHT AFTER YOU START THE LANE CHANGE TO DOUBLE-CHECK THAT YOUR PATH IS CLEAR.

TURNS. WHEN TURNING, CHECK YOUR MIRRORS TO MAKE SURE THE REAR OF YOUR VEHICLE WILL NOT HIT ANYTHING.

**MERGES**. WHEN MERGING, USE YOUR MIRRORS TO MAKE SURE THAT THE GAP IN TRAFFIC IS LARGE ENOUGH FOR YOU TO ENTER SAFELY.

**TIGHT MANEUVERS.** ANY TIME YOU ARE DRIVING IN CLOSE QUARTERS CHECK YOUR MIRRORS OFTEN. MAKE SURE YOU ALWAYS HAVE ENOUGH CLEARANCE.

HOW TO USE MIRRORS. USE MIRRORS BY CHECKING THEM QUICKLY AND UNDERSTANDING WHAT YOU SEE. LOOK BACK AND FORTH BETWEEN THE MIRRORS AND THE ROAD AHEAD. DON'T FOCUS ON THE MIRRORS FOR TOO LONG, OTHERWISE YOU WILL TRAVEL SOME DISTANCE WITHOUT KNOWING WHAT'S HAPPENING AHEAD.



UNDERSTANDING WHAT YOU SEE. MANY LARGE VEHICLES HAVE CURVED (CONVEX, "FISHEYE", "SPOT", "BUG EYE") MIRRORS THAT SHOW A WIDER AREA THAN FLAT MIRRORS. THIS IS OFTEN HELPFUL, BUT EVERYTHING APPEARS SMALLER IN A CONVEX MIRROR. THINGS ALSO SEEM FARTHER AWAY THAN THEY REALLY ARE. IT'S IMPORTANT TO REALIZE THIS AND TO ALLOW FOR IT.

#### SEEING HAZARDS

WHAT IS A HAZARD? A HAZARD IS ANY ROAD CONDITION OR OTHER ROAD USER (DRIVER, BICYCLIST, PEDESTRIAN) THAT POSES A POSSIBLE DANGER. FOR EXAMPLE WHEN A CAR IN FRONT OF YOU HEADS TOWARD A FREEWAY EXIT AND HIS BRAKE LIGHT COMES ON, IT COULD MEAN THAT THE DRIVER IS UNCERTAIN ABOUT TAKING THE OFF-RAMP. HE MIGHT SUDDENLY STOP OR RETURN TO THE HIGHWAY. THIS CAR IS A HAZARD. IF THE DRIVER OF THE CAR CUTS IN FRONT OF YOU, IT IS NO LONGER JUST A HAZARD; IT IS AN EMERGENCY.

#### IMPORTANCE OF SEEING HAZARDS

SEEING HAZARDS HELPS YOU PREPARE. YOU WILL HAVE MORE TIME TO ACT IF YOU SEE HAZARDS BEFORE THEY BECOME EMERGENCIES. IN THE PRECEDING EXAMPLE, YOU MIGHT MAKE A LANE CHANGE OR SLOW DOWN TO PREVENT AN ACCIDENT IF THE CAR SUDDENLY CUTS IN FRONT OF YOU. SEEING THIS HAZARD GIVES YOU TIME TO CHECK YOUR MIRRORS

AND SIGNAL A LANE CHANGE. BEING PREPARED REDUCES THE DANGER. A DRIVER WHO DID NOT SEE THE HAZARD UNTIL THE SLOW CAR PULLED BACK ON THE HIGHWAY IN FRONT OF HIM WOULD HAVE TO DO SOMETHING VERY SUDDENLY. SUDDEN BRAKING OR QUICK LANE CHANGES ARE MUCH MORE LIKELY TO LEAD TO ACCIDENTS.

**LEARNING TO SEE HAZARDS**. THERE ARE OFTEN CLUES THAT WILL HELP YOU SEE HAZARDS. THE MORE YOU DRIVE, THE BETTER YOU GET AT SEEING HAZARDS. THIS SECTION WILL TALK ABOUT HAZARDS YOU SHOULD BE AWARE OF.

### **ROAD HAZARDS**

WORK ZONES. WHEN PEOPLE ARE WORKING ON THE ROAD IT IS A HAZARD. THERE MAY BE NARROWER LANES, SHARP TURNS, OR UNEVEN SURFACES. OTHER DRIVERS ARE OFTEN DISTRACTED AND DRIVE UNSAFELY. WORKERS AND CONSTRUCTION VEHICLES MAY GET IN THE WAY. DRIVE SLOWLY AND CAREFULLY NEAR WORK ZONES. USE YOUR 4-WAY FLASHERS OR BRAKE LIGHTS TO WARN DRIVERS BEHIND YOU.

**DROP OFFS.** SOMETIMES THE PAVEMENT DROPS OFF SHARPLY NEAR THE EDGE OF THE ROAD. DRIV1NG TOO NEAR THE EDGE CAN TILT YOUR VEHICLE TOWARD THE SIDE OF THE ROAD. THIS CAN CAUSE THE TOP OF YOUR VEHICLE TO HIT ROADSIDE OBJECTS (SIGNS, TREE LIMBS). ALSO, IT CAN BE HARD TO STEER AS YOU CROSS THE DROP OFF WHEN GOING OFF THE ROAD OR COMING BACK ON THE ROAD.

FOREIGN OBJECTS. THINGS THAT HAVE FALLEN ON THE ROAD CAN BE HAZARDS. THEY CAN BE A DANGER TO YOUR TIRES AND WHEEL RIMS. THEY CAN DAMAGE ELECTRICAL SYSTEMS AND BRAKE LINES. THEY CAN BE WEDGED BETWEEN DUAL TIRES AND CAUSE SEVERE DAMAGE. SOME OBSTACLES, WHICH APPEAR TO BE HARMLESS, CAN BE VERY DANGEROUS. FOR EXAMPLE, CARDBOARD BOXES MAY BE EMPTY, BUT THEY MAY ALSO CONTAIN SOME SOLID OR HEAVY MATERIAL CAPABLE OF CAUSING DAMAGE. THE SAME IS TRUE OF PAPER AND CLOTH SACKS. IT IS IMPORTANT TO REMAIN ALERT FOR OBJECTS OF ALL SORTS SO YOU CAN SEE THEM EARLY ENOUGH TO AVOID THEM WITHOUT MAKING SUDDEN, UNSAFE MOVES.

OFF RAMPS/ON RAMPS. ENTRY/EXITS TO FREEWAYS CAN BE PARTICULARLY DANGEROUS FOR ALL VEHICLES. OFF-RAMPS AND ON-RAMPS OFTEN HAVE SPEED LIMIT SIGNS POSTED. REMEMBER, THESE SPEEDS MAY BE SAFE FOR AUTOMOBILES, BUT MAY NOT BE SAFE FOR LARGER VEHICLES OR HEAVILY LOADED VEHICLES. EXITS, WHICH GO DOWNHILL AND TURN AT THE SAME TIME, CAN BE ESPECIALLY DANGEROUS. THE DOWNGRADE MAKES IT DIFFICULT TO REDUCE SPEED. BRAKING AND TURNING AT THE SAME TIME CAN BE DANGEROUS. MAKE SURE YOU ARE GOING SLOW ENOUGH BEFORE YOU GET ON THE CURVED PART OF AN OFF-RAMP OR ON-RAMP.

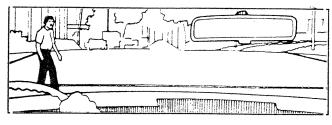
#### OTHER HAZARDOUS SITUATIONS

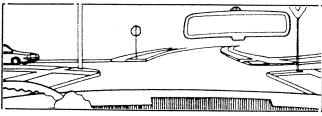
IN ORDER TO PROTECT YOURSELF AND OTHERS, YOU MUST ANTICIPATE WHEN OTHERS MAY DO SOMETHING HAZARDOUS. SOME CLUES TO PREPARE FOR THESE HAZARDS ARE DISCUSSED BELOW:

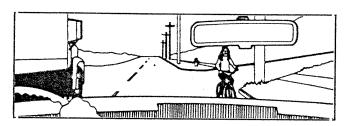
BLOCKED VISION. PEOPLE WHO CAN'T SEE OTHERS ARE VERY DANGEROUS HAZARDS. BE ALERT FOR DRIVERS WHOSE VISION IS BLOCKED. VANS, LOADED STATION WAGONS, AND CARS WITH THE REAR WINDOW BLOCKED ARE EXAMPLES. RENTAL TRUCKS SHOULD BE WATCHED CAREFULLY. THEIR DRIVERS ARE OFTEN NOT FAMILIAR THE LIMITED VISION THEY HAVE TO THE SIDES AND REAR OF THE TRUCK.

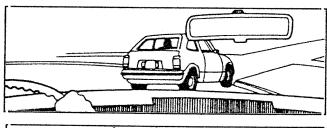
VEHICLES MAY BE PARTLY HIDDEN BY BLIND INTERSECTIONS OR ALLEYS. IF YOU ONLY CAN SEE THE REAR OR FRONT END OF A VEHICLE BUT NOT THE DRIVER, THEN HE OR SHE CAN'T SEE YOU. BE ALERT BECAUSE THE DRIVER MAY BACK OUT OR ENTER INTO YOUR LANE. ALWAYS BE PREPARE TO STOP.

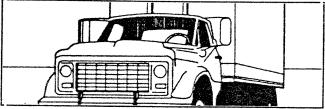
DELIVERY TRUCKS CAN PRESENT A HAZARD. PACKAGES, OR VEHICLE DOORS OFTEN BLOCK THE DRIVER'S VISION. DRIVERS OF STEP VANS, POSTAL VEHICLES, AND LOCAL DELIVERY VEHICLES MAY SUDDENLY STEP OUT OF THEIR VEHICLE OR DRIVE THEIR VEHICLE INTO THE TRAFFIC LANE.











PARKED VEHICLES CAN BE HAZARDS, ESPECIALLY WHEN THE PEOPLE START TO GET OUT. OR, THEY MAY SUDDENLY START UP AND DRIVE INTO YOUR WAY. WATCH FOR MOVEMENT INSIDE THE VEHICLE OR MOVEMENT OF THE VEHICLE ITSELF THAT SHOWS PEOPLE ARE INSIDE. WATCH FOR BRAKE LIGHTS OR BACKUP LIGHTS, EXHAUST, AND OTHER CLUES THAT A DRIVER IS ABOUT TO MOVE.

BE CAREFUL WHEN APPROACHING A STOPPED BUS. PASSENGERS MAY CROSS IN FRONT OF OR BEHIND THE BUS, AND THEY OFTEN CAN'T SEE YOU.

PEDESTRIANS AND BICYCLISTS CAN ALSO BE HAZARDS. WALKERS, JOGGERS AND BICYCLISTS MAY BE ON THE ROAD WITH THEIR BACK TO THE TRAFFIC, SO THEY CAN'T SEE YOU. SOMETIMES, THEY WEAR PORTABLE STEREOS WITH HEAD SETS, SO THEY CAN'T HEAR YOU EITHER. THIS CAN BE DANGEROUS. ON RAINY DAYS, PEDESTRIANS MAY NOT SEE YOU BECAUSE OF HATS OR UMBRELLAS. THEY MAY BE HURRYING TO GET OUT OF THE RAIN AND MAY NOT PAY ATTENTION TO THE TRAFFIC.

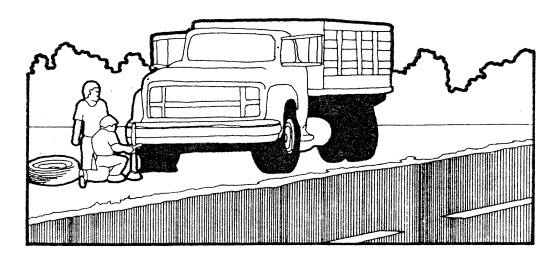
DISTRACTIONS. PEOPLE WHO ARE DISTRACTED ARE HAZARDS. WATCH FOR WHERE THEY ARE LOOKING. IF THEY ARE LOOKING ELSEWHERE, THEY CAN'T SEE YOU. BE ALERT EVEN WHEN THEY ARE LOOKING AT YOU. THEY MAY BELIEVE THAT THEY HAVE THE RIGHT OF WAY.

**CHILDREN.** CHILDREN TEND TO ACT QUICKLY WITHOUT CHECKING TRAFFIC. CHILDREN PLAYING WITH ONE ANOTHER MAY NOT LOOK FOR TRAFFIC AND ARE A SERIOUS HAZARD.

**TALKERS.** DRIVERS OR PEDESTRIANS TALKING TO ONE ANOTHER MAY NOT BE PAYING CLOSE ATTENTION TO THE TRAFFIC.

**WORKERS.** PEOPLE WORKING ON OR NEAR THE ROADWAY ARE A HAZARD CLUE. THE WORK CREATES A DISTRACTION FOR OTHER DRIVERS AND THE WORKERS THEMSELVES MAY NOT SEE YOU.

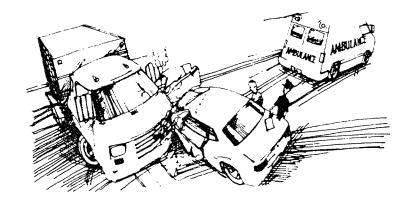
**DISABLED VEHICLE** DRIVERS CHANGING A TIRE OR FIXING AN ENGINE OFTEN DO NOT PAY ATTENTION TO THE DANGER THAT ROADWAY TRAFFIC IS TO THEM.



**SHOPPERS.** PEOPLE IN AND AROUND SHOPPING AREAS ARE OFTEN NOT WATCHING TRAFFIC BECAUSE THEY ARE LOOKING FOR STORES OR LOOKING INTO STORE WINDOWS.

CONFUSED DRIVERS. CONFUSED DRIVERS OFTEN CHANGE DIRECTION SUDDENLY OR STOP WITHOUT WARNING. CONFUSION IS COMMON NEAR FREEWAY INTERCHANGES AND MAJOR INTERSECTIONS. TOURISTS UNFAMILIAR WITH THE AREA CAN BE VERY HAZARDOUS. UNEXPECTED ACTIONS (STOPPING IN THE MIDDLE OF A BLOCK, CHANGING LANES FOR NO APPARENT REASON, BACKUP LIGHTS SUDDENLY GOING ON) ARE CLUES TO CONFUSION. HESITATION IS ANOTHER CLUE, INCLUDING DRIVING VERY SLOWLY, USING BRAKES OFTEN, OR STOPPING IN THE MIDDLE OF AN INTERSECTION. YOU MAY ALSO SEE DRIVERS WHO ARE LOOKING AT STREET SIGNS, MAPS, AND HOUSE NUMBERS. THESE DRIVERS MAY NOT BE PAYING ATTENTION TO YOU.

ACCIDENTS. ACCIDENTS ARE PARTICULARLY HAZARDOUS. PEOPLE INVOLVED IN THE ACCIDENT MAY NOT LOOK FOR TRAFFIC. PASSING DRIVERS TEND TO LOOK AT THE ACCIDENT. PEOPLE OFTEN RUN ACROSS THE ROAD WITHOUT LOOKING. VEHICLES MAY SLOW OR STOP SUDDENLY.



SLOW DRIVERS. MOTORISTS WHO FAIL TO MAINTAIN NORMAL SPEED ARE HAZARDS. SEEING SLOW MOVING VEHICLES EARLY CAN PREVENT AN ACCIDENT. SOME VEHICLES BY THEIR NATURE ARE SLOW AND SEEING THEM IS A HAZARD CLUE (MOPEDS, FARM MACHINERY, CONSTRUCTION MACHINERY, TRACTORS, ETC.). SOME OF THESE WILL HAVE THE "SLOW MOVING VEHICLE" SYMBOL TO WARN YOU. THIS IS A RED TRIANGLE WITH AN ORANGE CENTER WATCH FOR IT.

DRIVERS SIGNALING A TURN MAY BE A HAZARD. DRIVERS SIGNALING A TURN MAY SLOW MORE THAN EXPECTED OR STOP. IF THEY ARE MAKING A TIGHT TURN INTO AN ALLEY OR DRIVEWAY THEY MAY GO VERY SLOW. IF PEDESTRIANS OR OTHER VEHICLES BLOCK THEM THEY MAY HAVE TO STOP ON THE ROADWAY. VEHICLES TURNING MAY HAVE TO STOP FOR ONCOMING VEHICLES.

**DRIVERS IN A HURRY.** DRIVERS MAY FEEL YOUR VEHICLE IS PREVENTING THEM FROM GETTING WHERE THEY WANT TO GO ON TIME. SUCH DRIVERS MAY PASS YOU WITHOUT A SAFE GAP IN THE ONCOMING TRAFFIC, CUTTING TOO CLOSE IN FRONT OF YOU. DRIVERS ENTERING THE ROAD MAY PULL IN FRONT OF YOU IN ORDER TO AVOID BEING STUCK BEHIND YOU, CAUSING YOU TO BRAKE. BE AWARE OF THIS AND WATCH FOR DRIVERS WHO ARE IN A HURRY.

**IMPAIRED DRIVERS**. DRIVERS WHO ARE SLEEPY, HAVE HAD TOO MUCH TO DRINK, ARE ON DRUGS, OR WHO ARE ILL ARE HAZARDS. SOME CLUES TO IDENTIFY THESE DRIVERS ARE:

- ? WEAVING ACROSS THE ROAD OR DRIFTING FROM ONE SIDE TO ANOTHER.
- ? LEAVING THE ROAD (DROPPING RIGHT WHEELS ONTO THE SHOULDER, OR BUMPING ACROSS A CURB IN A TURN).
- ? STOPPING AT THE WRONG TIME (STOPPING AT A GREEN LIGHT, OR WAITING FOR TOO LONG AT A STOP).
- ? OPEN WINDOW IN COLD WEATHER.
- ? SPEEDS UP OR SLOWS DOWN SUDDENLY, DRIVING TOO FAST OR TOO SLOW.

BE ESPECIALLY ALERT FOR DRUNK DRIVERS AND SLEEPY DRIVERS LATE AT NIGHT

DRIVER BODY MOVEMENT AS A CLUE. DRIVERS LOOK IN THE DIRECTION THEY ARE GOING TO TURN. YOU MAY SOMETIMES GET A CLUE FROM A DRIVER'S HEAD AND BODY MOVEMENTS THAT A DRIVER MAY BE GOING TO MAKE A TURN EVEN THOUGH THE TURN SIGNALS AREN'T ON. DRIVERS MAKING OVER-THE-SHOULDER CHECKS MAY BE ABOUT TO CHANGE LANES. THESE CLUES ARE MOST EASILY SEEN IN MOTORCYCLISTS AND BICYCLISTS. WATCH OTHER ROAD USERS AND TRY TO TELL WHETHER THEY MIGHT DO SOMETHING HAZARDOUS.

CONFLICTS. YOU ARE IN CONFLICT WHEN YOU HAVE TO CHANGE SPEED AND/OR DIRECTION TO AVOID HITTING SOMEONE. CONFLICTS OCCUR AT INTERSECTIONS WHERE VEHICLES MEET, AT MERGES (SUCH AS TURNPIKE ON-RAMPS) AND WHERE THERE ARE NEEDED LANE CHANGES (SUCH AS THE END OF A LANE, FORCING A MOVE TO ANOTHER LANE OF TRAFFIC). OTHER SITUATIONS INCLUDE SLOW MOVING OR STALLED TRAFFIC IN A TRAFFIC LANE, AND ACCIDENT SCENES. WATCH FOR OTHER DRIVERS WHO ARE IN CONFLICT BECAUSE THEY ARE A HAZARD TO YOU. WHEN THEY REACT TO THIS CONFLICT, THEY MAY DO SOMETHING THAT WILL PUT THEM IN CONFLICT WITH YOU.

#### **ALWAYS HAVE A PLAN**

YOU SHOULD ALWAYS BE LOOKING FOR HAZARDS. CONTINUE TO LEARN TO SEE HAZARDS ON THE ROAD. NEVER FORGET THAT YOU LOOK FOR THE HAZARDS IN ORDER TO HAVE TIME TO PLAN A WAY OUT OF **ANY** EMERGENCY. WHEN YOU SEE A HAZARD, THINK ABOUT THE EMERGENCIES THAT COULD DEVELOP AND PLAN WHAT YOU WOULD DO. ALWAYS BE PREPARED TO TAKE ACTION BASED ON YOUR PLANS. IN THIS WAY, YOU WILL BE A PREPARED, DEFENSIVE DRIVER WHO WILL IMPROVE NOT ONLY YOUR OWN SAFETY BUT ALSO THE SAFETY OF ALL ROAD USERS.

#### TEST YOUR KNOWLEDGE

- 1. HOW FAR AHEAD SHOULD YOU LOOK?
- 2. WHAT ARE TWO MAIN REASONS FOR LOOKING AHEAD?
- 3. WHAT'S YOUR MOST IMPORTANT WAY TO SEE THE SIDES AND REAR?
- 4. WHAT IS A HAZARD?
- 5. WHY MAKE EMERGENCY PLANS WHEN YOU SEE A HAZARD?

IF YOU CAN ANSWER ALL OF THESE QUESTIONS CORRECTLY YOU PROBABLY KNOW HOW TO "SEE THE ROAD."

IF NOT. YOU SHOULD REVIEW THIS MATERIAL AGAIN.